Endoscope Storage Cabinet Model 25000 Operator's Manual

CUSTOM ULTRASONICS, INC.
144 RAILROAD DRIVE, IVYLAND, PA 18974
PHONE 215-364-1477/FAX 215-364-7674
www.customultrasonics.com

Custom Ultrasonics, Inc. documentation is considered PROPRIETARY and is made available for business operations and review by employees of the Company and regulatory agencies only. Distribution to third parties without prior permission is prohibited.

MODEL 25000 ENDOSCOPE STORAGE CABINET

PHYSICAL DESCRIPTION:

The ***Model 25000 Endoscope Storage Cabinet*** continuously purges each of the attached endoscopes' channels with forced air during storage, per programmable timer. It is fabricated of painted steel to provide an environment for endoscope storage that is free of water-absorbent materials [e.g. laminated or porous wood] to minimize the risk of endoscope bacterial and/or fungal growth.

The cabinet has been designed to accommodate up to (8) flexible endoscopes. The actual number that the cabinet accommodates will depend on the configuration or "design" of the endoscopes.

A gasket surrounds the door opening. When the doors are closed, the gasket is compressed providing a sealed enclosure.

On the side of the cabinet is an enclosure containing an air pump for the circulation of air through the channels of the endoscopes. Next to the air pump is a chamber for desiccant bags that are used to absorb moisture from the re-circulated air. Re-sealable plastic containers, each containing 6 desiccant bags, are provided with the initial Cabinet purchase. One package of (3) Humidity Indicator Cards are also provided. (Additional bags and cards are available – Desiccant bags Part # 20001 – Humidity Indicator Cards Part #20003)

A series of "vents", located in the desiccant chamber, allows for air movement through the (12) desiccant bags and into the air pump for re-circulation through the endoscopes' internal channels. All (12) desiccant bags must be present at all times during storage.

By opening the desiccant chamber door, the bags of desiccant can be removed, regenerated and replaced. [Refer to the maintenance section later in this manual.]

Located at the top of and inside the main chamber of the cabinet is a manifold containing several bulkhead fittings. Adapters are used to connect the endoscope to these bulkhead fittings. Circulation of air through the endoscopes' internal channels occurs via these adapters. Although a relief valve protects the air pump in the absence of adapters plugged into the bulkhead fittings, one adapter must be connected to the manifold at all times.

The storage cabinet's ON/OFF main switch and the adjustable programmable timer are located outside of the cabinet on the right-front wall.

Each ***Model 25000 Endoscope Storage Cabinet*** is equipped with door locks and a programmable keyless entry system. Locking the cabinet will reduce the incidence of endoscope theft.

Custom Ultrasonics, Inc. documentation is considered PROPRIETARY and is made available for business operations and review by employees of the Company and regulatory agencies only. Distribution to third parties without prior permission is prohibited.

INSTALLATION:

Secure the cabinet to the wall using the holes located along the top of the rear wall of the cabinet. When mounting your cabinet to the wall, do not drill holes through the interior walls of the cabinet.

CAUTION: Cabinet will tip over if not properly secured to wall and doors are opened.

Insert the hospital grade grounded plug into a 110 VAC, 15 – 20 AMP, 60 Hz, 1ϕ receptacle. The plug is located on the top of the cabinet.

The side door of the Cabinet provides access to the desiccant chamber. Place the twelve (12) bags of desiccant into this chamber. Place one desiccant card in between two desiccant bags. The door of the chamber must remain closed during use of the cabinet.

The programmable timer can be adjusted to operate the air pump for the desired amount of time from one (1) to thirty (30) minutes every hour. Initially, set the timer to operate for ten (10) minutes per hour, and increase by two (2) minute increments until the desired humidity level, as determined by the hospital/facility, has been achieved. Humidity indicator cards, placed between the desiccant bags, can be used to assist in measuring the humidity level of the desiccant. Drier environments and less frequent opening of the door will reduce pump usage. Conversely, more humid environments and/or more frequent opening of the cabinet's door will require increasing the pump run time via the timer.

On the front of the storage cabinet is a black momentary switch. When the momentary switch is engaged (in the up position) the air pump will function. This switch is used for testing the operation of the pump.

Activate the momentary switch daily to confirm proper operation of the air pump.

Custom Ultrasonics, Inc. documentation is considered PROPRIETARY and is made available for business operations and review by employees of the Company and regulatory agencies only. Distribution to third parties without prior permission is prohibited.

PLACEMENT OF THE ENDOSCOPE INTO THE STORAGE CABINET:

Place the control head of each endoscope into the holding bracket, and hang it vertically. Each of the two brackets are designed to hold two or four scopes (scope model dependent).

Each endoscope channel is attached to the air purge manifold via an adapter. The manufacturer and model type of the endoscope determines the type of adapters that are necessary to use.

Remove any adapters that are not attached to an endoscope, making sure to always leave at least one adapter plugged into the manifold at all times.

For the ***Model 25000 Endoscope Storage Cabinet*** manifold attachments, contact ***Custom Ultrasonics, Inc.*** Customer Service department.

CAUTION:

- One adapter must remain in the adapter manifold at all times to prevent damage to the air pump.
- Make certain the endoscopes are not hanging out of the cabinet, which could result in damage to the endoscope and/or cabinet when the door is closed.

Cabinet should be turned on with the front power toggle switch. When the cabinet is powered on, the green LED light below the switch will remain on. This main power switch should remain on at all times unless servicing is being performed.

The display on the front door will display the temperature in C° and the Relative Humidity (RH) inside the storage cabinet.

KEY PAD ENTRY SYSTEM:

Enter pass code to unlock, lock and open door:
To open door make certain the door handle lock is unlocked. Enter the pass code and * key on the keypad, lift handle and open door. You will then have approximately 5 seconds to open the door or the pass code will need to be re-entered. Door will automatically lock when closed.

PROGRAMMING SYSTEM:

All programming is done entirely from the front of the keypad. LED or sounder guidance makes programming easy. It takes seconds for an authorized user to change codes.

CODES:

Custom Ultrasonics, Inc. documentation is considered PROPRIETARY and is made available for business operations and review by employees of the Company and regulatory agencies only. Distribution to third parties without prior permission is prohibited.

The Control keypads allow up to 120 individual user codes. Codes can be 1 to 6 digits in length and digits may be repeated. The Master Code is always stored in user location one (1).

KEYPRESS FEEDBACK/AUDIBLE KEYPRESS:

Command and Control keypads, by default, acknowledges a keypress by momentarily illuminating the yellow LED or activate the sounder. This depends on the model. You can turn this ON/OFF during programming.

AUTO ENTRY:

This feature is used when you don't want to press the * key after entering your code. You only need to enter your code number (without pressing *) and the relay activates. To use this feature, the user codes must be the same length as the **master code.** Please remember to access program mode when auto entry is on, do not press the * key (Press: 99# master code), however, the * is required while entering programming commands.

PROGRAMMING:

1. ENTER PROGAMMING MODE	**YELLOW LED**
Press 99# (master code) *	Flashes slowly
2. To Change Master Code[1]	
Press 1# (new master code)*	Flashes fast
Press (new master code)*	Flashes slowly
3. To Add/change second code	
Press 2# (new user code)*	Flashes fast
Press (new user code)*	Flashes slowly
4. To Add/change third code	
Press 3# (new user code)*	Flashes fast
Press (new user code)*	Flashes slowly
5. Up to 120 codes may be added In this fashion.	
6. Exit programming mode	
Press *	Off

NOTES:

Custom Ultrasonics, Inc. documentation is considered PROPRIETARY and is made available for business operations and review by employees of the Company and regulatory agencies only. Distribution to third parties without prior permission is prohibited.

- COMMAND AND CONTROL KEYPADS ARE FACTORY PROGRAMMED WITH A MASTER CODE OF **1234.**
- **[1]THE MASTER CODE IS ALWAYS STORED IN USER LOCATION 1.**
- THE MASTER CODE ALLOWS ACCESS TO PROGRAMMING MODE AND ACTIVATES THE MAIN RELAY.
- BY DEFAULT (AUTO-ENTRY IS OFF), ALL CODES MUST FOLLOWED BY THE * KEY.
- CODES MAY BE FROM 1-6 DIGITS IN LENGTH, AND DIGITS MAY BE REPEATED.

- IF YELLOW LED LIGHTS SOLID WHILE IN PROGRAMMING MODE, AN ERROR HAS OCCURRED. PRESS * TO CLEAR (YELLOW LED SHOULD START FLASHING) AND START OVER FROM STEP 2 OR 3 ABOVE.

PROGRAMMING OPTIONS CHART:

IF THE PRE-PROGRAMMED DEFAULT VALUES MUST BE CHANGED OR ADDITIONAL FUNCTIONS ARE DESIRED, THE FOLLOWING OPTIONS MAY BE PROGRAMMED.

1. ENTER PROGRAMMING MODE	PRESS 99# (MASTER CODE) *
2. CHANGE MASTER CODE/SET MAIN RELAY TIME **EXAMPLE: MASTER CODE OF 4321/RELAY TIME OF 10 SEC**	PRESS (TIME) #1#(NEW CODE)*(NEW CODE) **PRESS 10 # 1 # 4321 * 4321 ***
3. ADD/CHANGE USER CODE	PRESS(USER NUMBER)#(NEW CODE)*(NEW CODE)
4. DELETE USER CODES	PRESS (USER NUMBER) #**
5. TURN KEYPRESS FEEDBACK/AUDIBLE ON	PRESS 30 # 0 # 1 # **
6. TURN KEYPRESS FEEDBACK/AUDIBLE OFF	PRESS 30 # 0 # 0# **
7. TURN YELLOW LED/SOUNDER ON WITH RELAY	PRESS 30 # 1 # 1 #**
8. TURN YELLOW LED/SOUNDER OFF WITH RELAY	PRESS 30 # 1 # 0 #**
9. EXIT PROGRAMMING MODE	PRESS *

MAINTENANCE:

Clean both the interior and exterior of the cabinet on a routine basis using a damp cloth and a standard, EPA registered, hospital grade, non-abrasive surface cleaner/disinfectant. The surface of the cabinet should be dried using a soft, clean, dry, lint-free cloth. *Clean* the stainless steel drip plate(see pg. 9 #7) once a day.

TO RECHARGE THE DESICCANT:

Custom Ultrasonics, Inc. documentation is considered PROPRIETARY and is made available for business operations and review by employees of the Company and regulatory agencies only. Distribution to third parties without prior permission is prohibited.

Once the baseline pump timing is established, the humidity level of the desiccant bags within the cabinet should be monitored on a daily basis using the humidity indicator cards available from ***Custom Ultrasonics, Inc.*** Follow instructions on the humidity indicator card for proper monitoring of the desiccant bags.

When the indicator card shows that the desiccant bags need to be changed, remove the (12) bags of desiccant from their holding compartment. Follow instructions on the desiccant bag for the re-activation procedure or contact Custom Ultrasonics, Inc. at 215-364-1477 for further information or to order new bags.

To maintain the function of the storage cabinet, an extra set of desiccant bags should be held in reserve in a sealed container. The storage cabinet can then be operated continuously.

FILTER REPLACEMENT:

The air pump black pre-filter should be replaced once a year Part # 20010.

The air pump HEPA post filter (if equipped) should be changed every **3** months Part # 13075.

MAINTAIN THE INTEGRITY OF THE AIR PUMP:

If air is heard being released through the "relief valve" when the endoscopes are connected to the purge manifold, contact ***Custom Ultrasonics, Inc.*** Service Department.

RE-ORDERING ENDOSCOPE STORAGE CABINET SUPPLIES:

To re-order desiccant bags, humidity indicator cards, filters and repair parts, please visit our website at www.customultrasonics.com. In the left column click on "order replacements online" then click on "Storage Cabinet & Accessories".

Parts may also be ordered by fax at (215) 364-8760.

CAUTION STATEMENTS:

1. Installation:

   a. When installing ***Model 25000 Endoscope Storage Cabinet,*** make certain to have a minimum of 2 persons to support and mount the cabinet, otherwise, bodily injury and physical damage to the equipment and surrounding area may occur.

   b. Make certain that when bolting the cabinet to the wall:

      i. Cabinet is located flush to desired wall.

      ii. The provided mounting holes are used.

      iii. Mounting materials (bolts, etc.) suitable to facility's structure and all building code are used.

Custom Ultrasonics, Inc. documentation is considered PROPRIETARY and is made available for business operations and review by employees of the Company and regulatory agencies only. Distribution to third parties without prior permission is prohibited.

iv. There is a 1 inch (2.54 cm) minimum clearance above the heat vent output on the top of the unit.

2. Electrical:

a. Make certain that the cabinet's electrical plug is inserted in a properly grounded, 110 VAC, 15 – 20 AMP, 60 Hz, 1ϕ receptacle otherwise:

i. Electrical shock and injury could occur to the installer.

ii. Damage could occur to the equipment.

3. Operator Hazard [User potential hazard]:

a. Take precaution when reaching up to load an endoscope into the cabinet.

b. When loading endoscopes into the storage cabinet, moisture may make the floor in front of the cabinet slippery.

i. Make certain the area in front of the cabinet is dry.

ii. Make certain the area in front of the cabinet is free of obstructions.

4. Service

a. When replacing or opening any electrical component, make certain always to unplug the storage cabinet.

5. Damage to endoscopes [operator related potential hazard to endoscopes]:

a. Make certain the endoscope is properly and securely placed in the holding bracket.

i. Failure to confirm this could cause the endoscope to fall within the cabinet and be damaged.

b. Make certain that no parts of the endoscope are hanging outside of the door.

i. Closing the door on the endoscope may cause significant damage.

c. Use caution when placing the endoscope into the cabinet.

i. Rough handling or allowing the endoscope's tip to hit the wall of the cabinet may cause endoscope damage.

d. Always use the endoscope in accordance with the endoscope manufacturer's recommendation.

Custom Ultrasonics, Inc. documentation is considered PROPRIETARY and is made available for business operations and review by employees of the Company and regulatory agencies only. Distribution to third parties without prior permission is prohibited.

6. Operator Use or Misuse related to potential hazards may become humid and failure to:
    a. Inspect the desiccant bags and humidity indicator cards daily
        i. If not checked and the adsorbent material in the desiccant bags become saturated, the cabinet may become humid and not facilitate drying of the endoscope
    b. Properly connect the male bulkhead adapter fittings to the cabinet's female bulkhead purge manifold connector.
        i. The storage cabinet connector must also be attached properly to the endoscope.
        ii. If either end is not connected, the internal channels of the endoscope(s) will not have the proper air flow to facilitate drying.
7. Daily Cleaning:
    a. The stainless steel drip plate [located on the inside of the storage cabinet base] must be cleaned and disinfected daily using a damp cloth and a standard hospital grade, EPA registered, non-abrasive, surface disinfectant/cleaner.
    b. Check inside of cabinet for rust or peeling paint. If noted, immediately repair the surface and repaint. Contact ***Custom Ultrasonics, Inc.*** for instructions.
8. Daily Observations:
    a. Once a day, press the momentary override switch located on the front side door panel.
        i. When activating this switch, check to ensure that the air pump and vent fan are turned on and are operational.
    b. Once a day, listen for the operation of the air pump to confirm that it is coming on by the automatic timer.
        i. The pump should run for 10 minutes or the pre-set time noted on the dial on the front of the cabinet.
        ii. The pump is factory set at 10 minutes, but can be changed according to hospital/facility requirements.

Custom Ultrasonics, Inc. documentation is considered PROPRIETARY and is made available for business operations and review by employees of the Company and regulatory agencies only. Distribution to third parties without prior permission is prohibited.